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# THE AGRICULTURAL STUDENT

*of*  
OHIO STATE UNIVERSITY



OHIO  
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September 1911 — Double Number

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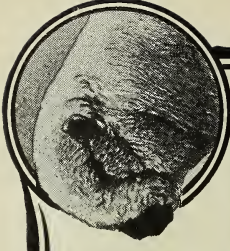
I claim it if it does not, you are to cancel the charge.

Mr. W. H. Schantz, Hastings, Mich., Supt. of the Sheep Department of the Michigan State Agricultural Society, writes: "For three months, beginning March 1st, have fed all my sheep, dogs and pigs and one of my work horses, that was not in condition, your Sal Vet. The horse has 'rounded out' in splendid shape; my sheep never looked so well at this time of the year, and my hogs and spring pigs are in the best of health—in short, I am well satisfied with results. I have been slow to feed any of the stock foods or medicated foods, thinking that good feeding and ordinary conditions ought to keep stock in good health, but your Sal Vet has certainly improved, in a marked degree, the condition and appearance of my stock.

Yours very truly,

W. H. SCHANTZ, of Michigan State Agricultural Society, Hastings, Mich."

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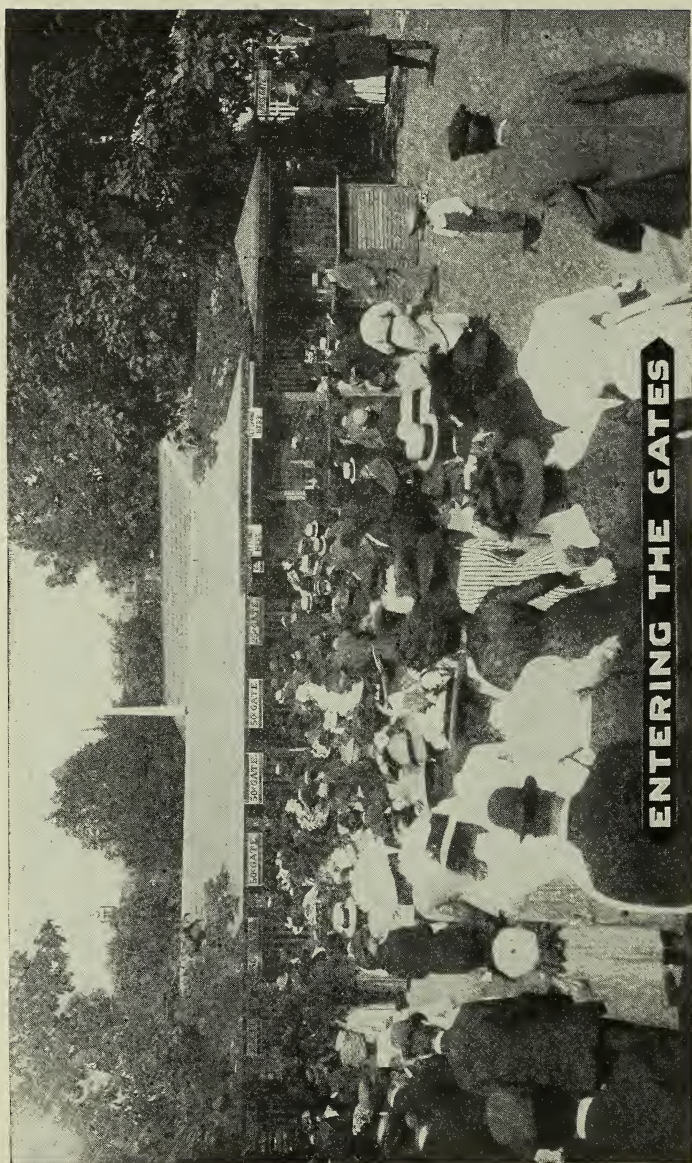






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# THE AGRICULTURAL STUDENT

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Vol. XVIII. OHIO STATE UNIVERSITY, COLUMBUS, SEPTEMBER, 1911 Number 1

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## The Farmer and the State

JUDSON HARMON  
Governor of Ohio

IT is to the farmer folk within her confines that Ohio as a commonwealth owes the largest share of her greatness. Since the days of Putnam and Marietta—since the days when first Ohio entered the arena of this mighty nation's campaign for a better, more blessed civilization and the elevation of her peoples to higher planes, socially, ethically, and commercially—Ohio's rural population has continued to be the bulwark of her progress. Clearly, then it is the duty as well as the prerogative of the State to assure to these people the best obtainable, not only in relation to their material, commercial, and economic advancement—important as that is—but also in regard to their social and moral welfare.

We have made a grand, good start in improving our system of agriculture through general education as well as by dissemination of the latest scientific facts concerning agricultural methods and appliances—such facts as enable our agriculturists to produce two blades of grass where before there grew but one.

It is with a pardonable pride that we may point to such institutions as our College of Agriculture, our Experiment Station, and our State Board of Agriculture, yet 'tis but the dawning of what is to be the full glory of the day.

We are at the portals of "The Scientific Era" in Agriculture. The educational propaganda in agriculture has made great strides recently, but under the fostering hand of a state newly awakened to her sense of duty, we shall surely see yet greater achievements. Aid to the farmer in adding to his personal efficiency is a duty born of a just demand.

The isolation of rural life, however, retards in a measure social and moral development of our ruralists. Is it not possible that this phase has too long escaped our attention? Can we not work out some scheme to enable our people to achieve greater happiness and a larger degree of comfort in the open country? Once accomplish this, and the vexing problem of urban congestion and the headlong rush of many misled country folk after the dazzling mirage of city life will solve itself.

To place at the van of the country's march of social progress the proper influences, those that work so mightily in placing our people on a higher plane of real happiness—that is the great problem of the State. It looks beyond the morbid quest for gold to the righteous quest of golden happiness for all the people. Clear thinking and hearty co-operation on the part of our rural peoples can not fail in effecting the desired results.

## Remarks

A. P. SANDLES

Secretary Ohio State Board of Agriculture

**T**HE young man who is willing to work between meals has a chance to be useful and good for something.

There is gold in dirt. He who learns the alchemy of extracting from the soil flowers, fruit, grains, meat, real wealth and happiness, has done a good task.

He who so farms as to make increased yield and soil fertility grow in the same furrow is a true farmer.

He who plows early and deep will have reason to rejoice at harvest time.

The frost is God's harrow.

Clods yield no crop or crown.

He who is keen of observation and skilful in comparing the results of experiment and experience will be able to coax the most prosperity out of the ground.

Old ways, of course, were good. They have their day, then pass away, because the world is not hitched to any way-side post. If this were not true the world would not be growing better.

He who is brave enough to discard the old, adopt the new and go marching bravely on will climb the stairs of progress.

He who plants a straight row of corn has more nearly learned the art of farming than he who does not.

A good seed bed equals a bank account.

Good drainage invites a blessing and insures a profit.

The humor of the dirt is the humor of the country.

Distress follows in the wake of drouth, floods and lean harvests.

Garden sass, farm produce, and barn-yard music dare not take a vacation or go on a strike.

It is a good sign for the country when young men dig into and learn the chemistry of the soil.

He who learns the far reaching value of the Fair and Exposition is traveling toward greater reward for his labor.

He who so disposes of his time as to permit himself to see and discover what the rest of the world is doing will possess wisdom and be wise in council.

The State Fair is the Cross-Roads where the fellows who do things, meet and say "Hello!"

Good wages can be made there by just "seeing things."



## Opportunities in Agriculture

WILLIAM OXLEY THOMPSON, D. D., LL. D.  
President Ohio State University

THE land grant colleges growing out of the Morrill Act in 1862 have been the greatest single agency in stimulating industrial education for the past generation. The act was passed in the midst of the civil war and has since extended its benefits to every state in the union. Subsequently, provision was made for the Experiment Stations, and the funds for both colleges and stations have been doubled. At the outset the colleges were confronted with the problem of teaching the subject of agricul-

entific agriculture one of the most noteworthy features of modern education.

The men educated in the Agricultural Colleges have found the following opportunities open to them:

1. The work of experimentation in the Experiment Stations of the several states. It is worthy of note that the states have with a practical unanimity made generous appropriations to supplement the funds provided by the Federal Government. These stations have addressed themselves to the prob-



EXPERIMENT STATIONS NEED GOOD MEN.

ture at that time poorly defined and with no teachers prepared for the work. Scientific experiment was the basis of an experience that could be put in pedagogic form and used as a basis of instruction. The growth of the work in both colleges and stations although slow at the beginning soon increased, and with the organization and development of the Department of Agriculture at Washington, D. C., opened the way for the employment of a large number of men trained in the methods of scientific agriculture. The revival of interest throughout the country served as an additional stimulus to the movement, until we now find the movement in sci-

lems peculiar to the states in which they were located, and have made exhaustive and continuous studies of the local conditions. Up to date the supply of men adequate to this work has been quite below the demand.

2. The organization of the Department of Agriculture and its steady development by increasing appropriations has enabled the Federal Government to lay hold of the larger problems affecting the country at large. This has called for expert advice and men of scientific training who could give continuous service in the cause of science and agriculture. The men of this character now employed by the Government num-



ber thousands, and the prospect is that the work will increase with the development of the country.

3. The Colleges of Agriculture themselves have found it difficult to secure a sufficient number of properly educated men qualified to teach the subject. The advance in the general field has kept the demand for educated men greater than the supply. The original idea that Agricultural Colleges should send their graduates back to the farm still prevails, but we have come to see that the other lines of activity make a

5. The movement for agriculture in the rural schools is beginning to develop the need of educated teachers. Anybody can talk pleasantly about agriculture or even teach it for an hour or two, but it is quite a different thing to put the subject in a teachable form for one or more years. This need will doubtless increase and call for young men and women of suitable education to find a permanent place in our educational system.

6. The farm has emphasized the need of scientific methods. Where farm



SPREADING THE GOSPEL OF "THE NEW AGRICULTURE."

legitimate demand upon men with agricultural education, and that we can not afford to leave these interests in the hands of men whose education and experience have not kept them in close and intelligent sympathy with the practical work of the farm.

4. The agricultural press has greatly increased in influence and calls not only for correspondents from the farm, the college, and the station, but for a corps of men whose specialized education in agriculture enables them to speak with authority upon the problems of the farmer.

owners have been able to educate their sons and provide for a succession in ownership the young men have found a most attractive and remunerative field of work. The more diversified and specialized farming has become the greater the demand for technical education in the phase of farming developed. Men owning large farms have found that the day is rapidly passing when important and valuable interests in live stock and investments may be entrusted to men whose only qualification is experience under the direction of owners. The farms are now calling for men of edu-



cation, and of sound judgment, of integrity of character and of adaption to the work of productive farming.

These are only a few of the facts that might be recited as suggesting the opportunities in agriculture for young men. No one now would attempt to forecast the development in the next

generation. The young man of today needs the best possible equipment for the work, and if he has the requisite merit in him will find abundant opportunity to follow the lead of his tastes and be useful in the most ancient and yet the most honorable calling in which the human race has engaged.

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Editor's Note: This is the first of a series of articles which shall appear from time to time on the general subject of "Opportunities in Agriculture," with especial emphasis being placed on those which so evidently accrue to the

**Student in Agriculture.** Many men of prominence in the specialized and technical phases of practical agriculture will furnish the subsequent articles for the edification and delectation of our readers.



REALIZING A REAL OPPORTUNITY.

## The Soil: Ohio's Most Valuable Asset

ARTHUR G. M'CALL, B. Sc.  
Professor of Agronomy

The soils of Ohio constitute the most valuable asset possessed by the state, for out of it must come all of the material which is to feed the people. For this reason the conservation of the fertility of our soils and the building up of their productive capacity is our most important problem. The great questions facing our political leaders dwindle into

the possibility of doubling the present productive capacity of our soils by means of more thorough drainage, systematic rotations including clover, the use of stable manure, thorough, persistent tillage and the intelligent use of commercial fertilizers. Careful records show that this upbuilding process is accompanied by increased net profits, and



insignificance when compared with the great responsibility which rests upon the farmers of the entire country and of Ohio! Governments may rise and governments may decline, but still the people must be fed!

Fortunately the people of Ohio are becoming awakened to the situation, and many of our progressive farmers are giving practical demonstrations of the possibilities of greatly increasing the productive capacity of our soils through improved methods of management. They are giving us conclusive proof of

that the improvement in fertility may be made permanent.

Our Ohio Experiment Station and the College of Agriculture are taking a leading part in the great education campaign which is being waged all over the country in behalf of soil conservation.

If rightly managed our soils will remain capable of renewing their bounty forever, and agriculture will be a live occupation long after our forests have disappeared and our mines have ceased to yield up their treasures.

## The Lesson of the Premium Plate

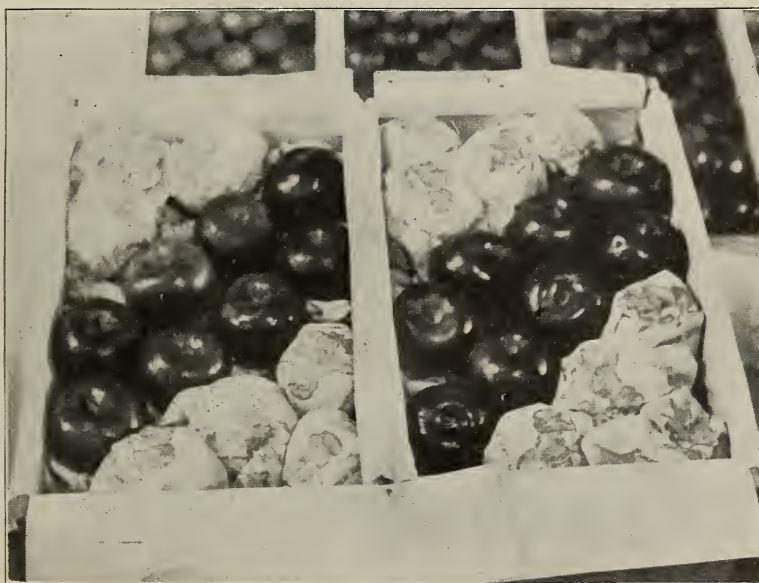
WENDELL PADDOCK, M. Sc.  
Professor of Horticulture

EXHIBITIONS of fruit usually catch the eye of the casual observer even when they are below standard. This is, no doubt, due to attractive colors and forms. But an exhibition at a fair should be educational in all respects, and if it is not, it is scarcely worth the making.

It strikes me that one of the first things that a good exhibit will teach is what first class fruit is. Take for in-

this type, and the fruits upon any tree will be found to vary in this respect. By the exercise of a little judgment and time anyone can select enough fruit for exhibition purposes that will be typical of the variety, and the specimens will be nearly alike in this respect as well as in size.

Not so very many years ago the idea was prevalent that first prizes should be



“PICK OUT A PLATEFUL.”

stance a plate of apples that a competent judge has given first prize; we will see at once that the five specimens are as nearly alike in all respects as are peas in a pod.

First of all the apples will be typical in form for the variety. All who are familiar with the Baldwin have in mind its usual form. But at the same time it is not difficult to select specimens that are more elongated than usual; in fact, some trees invariably produce fruit of

awarded to the largest specimens. But such fruits are clearly monstrosities, and in no way represent the variety. Happily this notion is passing, and the skillful judge will discriminate against over-large fruit. It not infrequently happens that an exhibitor will spoil an otherwise good plate of fruit by placing an extra large specimen on top. This, of course, ruins his chance for a prize, even though the fruits may be perfect in other respects.



Color in fruit appeals to all, and perfection in this respect is equally important for either exhibition or for commercial purposes. It is a feature, however, which may be overdone for exhibition purposes as there is such a thing as selecting fruit that is overcolored for the variety. While the specimens should be representative in color, it is equally important that uniformity should prevail. Polished fruit is never in good taste,

tomed to apple scab or sooty blotch that we are inclined to think that small blemishes of this kind are varietal characteristics. At any rate blemishes of this kind are all too common on exhibition fruit. The judge will surely discriminate against such specimens, and if such faults are very glaring he will be warranted in disqualifying the entire exhibit. A wormy fruit is never permissible, and even the lack of a stem on a



“HELP YOURSELF.”

and the judge is justified in considering the lack of bloom as a blemish.

Quality is a feature that is seldom considered unless a premium is placed upon dessert fruit, or fruits from different locations are pitted against each other. In the latter case considerable weight should be given to quality, but at best it is a character that is very difficult to judge satisfactorily since so much depends upon personal equation and previous training.

Some of us have become so accus-

fruit that is picked with the stem on is regarded as a blemish. In the eyes of the judge an entire exhibit is no better than the poorest specimen, consequently too much pains cannot be taken to see that each specimen is as nearly perfect as possible in all respects.

These main features may be summed up in a scale of points as follows:

Form .....	15 points
Size .....	20 points
Color .....	25 points

(Continued on page 54.)



## The State Fair and the Live Stock

CHARLES S. PLUMB, B. S.  
Professor of Animal Husbandry

THE agricultural fair in most important communities, where farming is seriously considered, relies upon the live stock exhibit for its chief attractions. While the State Fairs of the Middle West are great agricultural expositions, in which farm products and machinery generally find prominent positions, live stock is the largest and chief attraction.

Almost from the first, since the fair was introduced in this country, it has

the annual show of the Royal Agricultural Society, and the year a British breed is recognized by that Society, it is a well established historical point in its career.

Many persons attend fairs with the view of comparing important exhibits of the breeds, to study their relative merits, with the view of purchase later. Only recently, I visited a Shorthorn breeder in Western Pennsylvania who had a lot of excellent cattle of his own

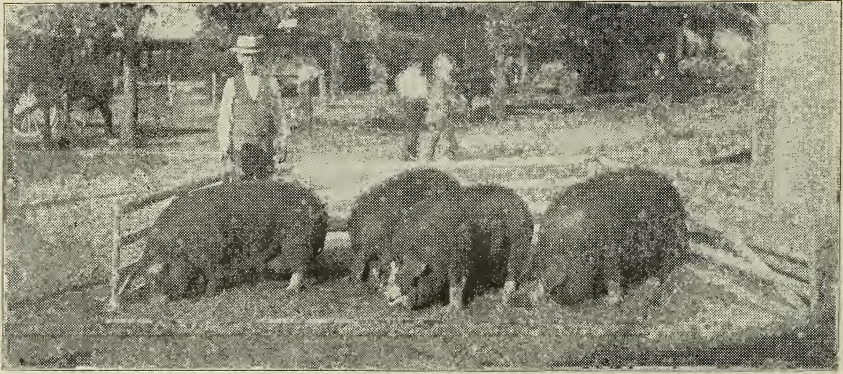


PROUD OF OUR WINNINGS.

been a medium for the display of improved breeds. At these earlier shows, as at the later ones, the farmers gathered to study the characteristics of the animals exhibited, to decide on their adaptability to their own farm conditions, to purchase, or to gain further knowledge. No other agency has been considered equal to the fair for introducing breeds to the public and thus opening the way into a new field of purchases. In Great Britain, no breed has real recognition, until given a class at

breeding. He had a distinctly superior aged bull, which he told me with some pride he had purchased at the Ohio State Fair, where he won second in his class. He had attended the fair with the purpose of finding a creditable sire for his herd, and ever since, had congratulated himself on his purchase.

Many men attend the fair to watch the contests within a breed, to see how old favorites come forward, and to note the entrance of new candidates for honors. About every building on the fair



RIBBON HOGS.

grounds housing stock, one will find groups of men who exchange notes and make comparisons, that furnish important entertainment and instruction for them for days to come. Here the herdsmen and the herd owner meet on common ground and exchange views and pass in comment on the animals.

The work of the judge of live stock in the present day show, is more exacting and requires more careful and intelligent consideration, than at any time heretofore, in the history of the show circuit. The work of the judges in many shows is watched with keen interest by both spectator and herdsman.

More than one exhibitor has brought his stock to the show, satisfied with his own conceit, to be humbled by the rating of the judge. Where the exhibitor had the real merit of a stockman looking for the truth, the decisions of the judge were to his lasting benefit. He was led to see his herd deficiencies, and to secure such improvement in purchase and breeding, as to materially add to his prestige on later occasions, both in the show ring and out. The most valuable lessons many stockmen have received, were secured in the show ring. No man becomes a great exhibitor, without passing through the crucible of the judge.

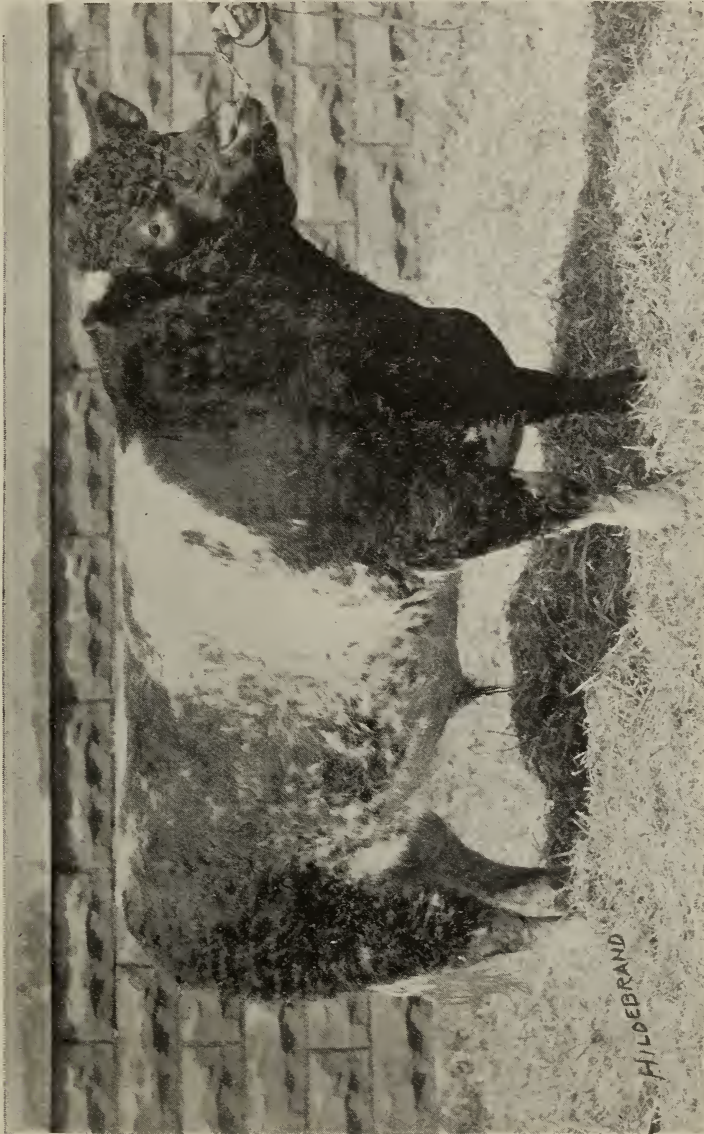


THE SHEPHERDS POSE THEIR CHARGES.



Many persons have no conception of the characteristics of some of the breeds until seen at the fairs. There are always herds shown, that have but little,

the stockman. is the opportunity to advertise and place his stock before the public. The wise exhibitor, who is familiar with the show circuit, will find a



Courtesy of Thos. Johnson & Sons.

“BEAT ME IF YOU CAN.”

if any, representation over wide extents of territory in a State. Men read and hear of these breeds, and the only opportunity they have to see them may be at the fair.

Another feature, of great value to

most valuable field at the fair for disposing of such of his stock as he may wish to sell. He carries with him his better class animals, and makes the best impression possible, while the buyer haunting the fair naturally has a con-



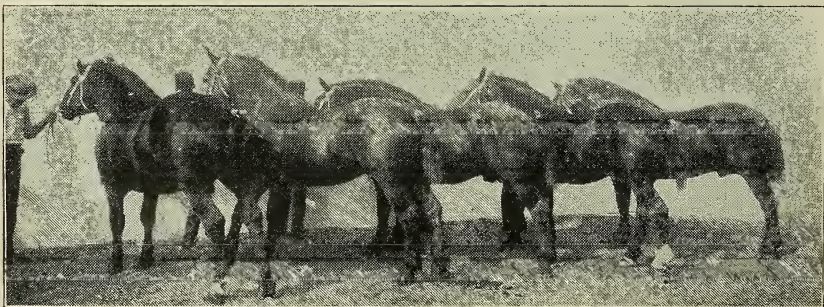


JUDGING WOOLLY BEAUTIES AT OHIO STATE FAIR.

centrated and often desirable field for selection. Correspondence, or traveling about from herd to herd over the country, requires more time and much greater expense. Then if one purchases a prize winner, after inspection, he feels gratified that he could see the animal in comparison with others of the same class.

The fair should be an inspiration to the young man who is about to enter his

own live stock field as a future occupation, for certainly the gathering together of the herds at some of the shows is a magnificent testimonial of the work of the breeder and feeder. A choice collection of varieties of grain, or apples, or butter, is a small and insignificant thing, compared with a choice exhibit of animals, full of life, action, and beauty, and representative of the highest ideals of the breeders' art.

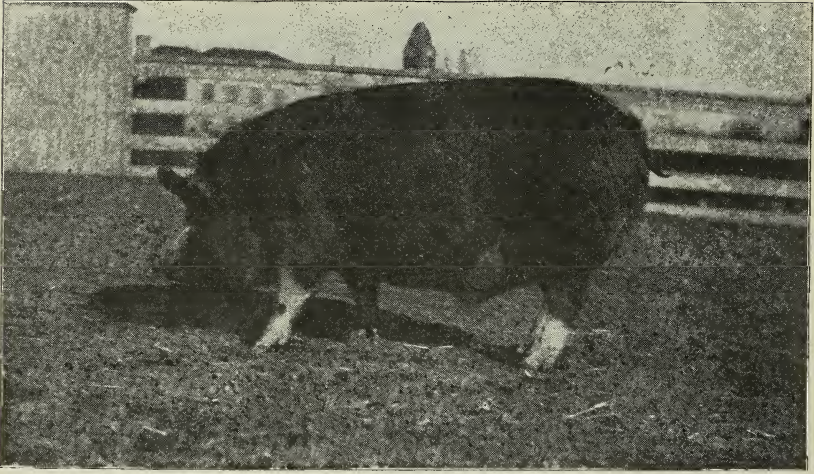


OUT FOR BLUE RIBBONS.

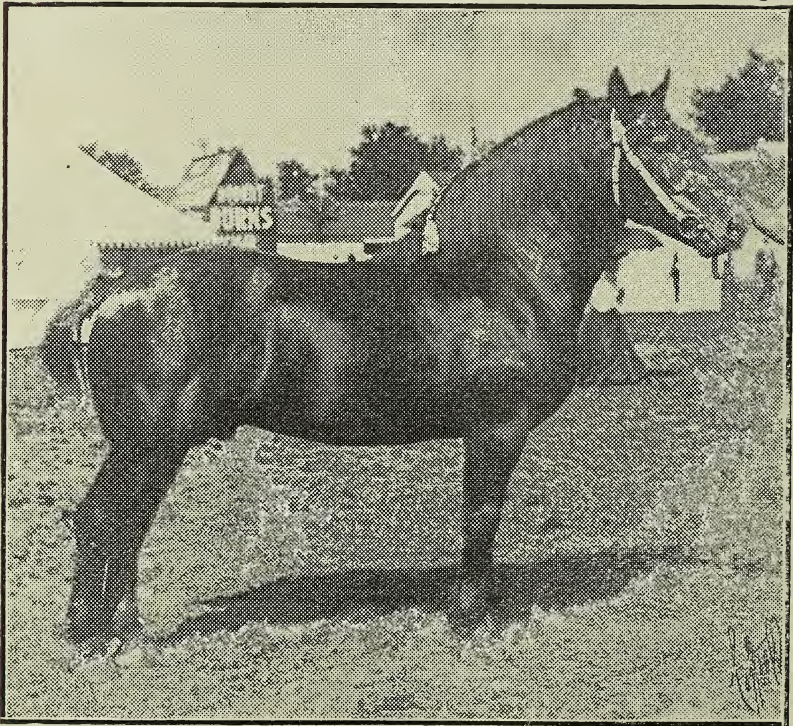


PRIZE WINNERS.





A BARROW CHAMPION.



CONSCIOUS OF SUPREMACY. Courtesy of McLaughlin Bros.



## The Ruralist and Religion

REV. J. J. RICHARDS

THE tendency of the past years towards centralization is now having a marked effect upon the state and nation at large. In a nation like ours, no part or class can be ignored or made to suffer without affecting the whole. This tendency of pushing, crowding everything toward the van is having a disastrous effect upon the foundation of our national wealth and prosperity—The Rural Districts.

Country school houses once filled with

large returns, are now barely self-supporting. Homes, once the scene of youth and prosperity, have given way to that of age and penury. The factories that once furnished the world's financial kings, the nation's educators, scholars, professional men, and rulers, are now being closed. These conditions are already seriously affecting our moral, religious and economic life. Out of the above conditions have grown "The high cost of living," "Corrupt legisla-



THE HOPE OF THE FUTURE.

strong, healthy, pure country boys and girls are now empty and dilapidated; crumbling amid the debris and weeds that now fill a once clean and delightful playground. Country churches, once the mecca for the entire community, the comfort and delight of the aged, the social center for the young men and young women, and the moral and religious nursery of the rural children, have closed their doors and are but the relics of better days. These outward conditions are the indices to the real financial, moral, and religious condition of the community. Farms, once yielding

tion," "Sabbath desecration," and many other menacing influences.

Add to the number of intelligent farmers, keep the boy on the farm, increase the soil's productiveness, and you decrease the cost of living. Centralize the country school in the country with rural influences, and you will raise the moral standard of the entire country. Rebuild the country church, let it become the center of a renewed consecrated power and influence, then inject a liberal supply of this pure, fresh blood into the veins of our city and national life and we shall be able to counteract

much of the poison now endangering the life of our moral and religious institutions.

But it is sometimes easier to diagnose the disease than to apply the remedy. So it is in the case of the rural church and its problems. We know the rural church has been a prime factor in our civilization. How to make it so again is the problem now enlisting the attention of thoughtful, patriotic men everywhere. These conditions have come to pass more

ferent that it is impossible for a man to become thoroughly interested in the things that are of most interest to both peoples at once. The country minister ought to be born and reared in the country. He should be refined and educated in the highest degree. Too many of our churches send the poorest ministers they have to the country churches, when the reverse ought to be the fact. It takes a man to be a country preacher. He ought to be physically strong, men-



A SWEET INFLUENCE THAT WILL ELEVATE.

through neglect than possibly any other cause, and if they are to be remedied there must be an awakening among those who have the power to change these conditions.

The country preacher occupies a prominent place in the solution of these problems. What it requires is a man especially adapted and fitted for religious work—of the highest order in the country! No man can be a minister, successful both in country and city at once, for the tastes, education and environment of the two peoples are so dif-

tally alert, and with the faith and vision of a prophet. He should be interested in the products of the soil and in the latest and best methods of producing them.

As every minister should live among his parishioners, preaching by example as well as by precept, so should the country minister live in the country among his people, and his work should be so arranged that no part of it be a great distance from him.

Ample provision should be made for his comfort and support. A modern



parsonage should be built with all the comforts of the best homes of his parishioners. The location should be central, beautiful, inspiring—a few acres of ground sufficient to keep a cow, horse, chickens, a few pigs, and to produce all the garden and fruit the minister needs.

From this beautiful and well kept parsonage should radiate agricultural, moral and religious instruction, and a sweet influence that will elevate the entire countryside. The minister's support should be adequate to meet all his demands and enable him to live as a citizen, to die as a man, and not as a pauper.

Another factor in the solution of the country church problem is the country people themselves. A competent man,

to win victories, must have loyal followers. It is a sad fact that most of the farmers the country over are today indifferent to the religious interests of the community, and the man who begins to point out the needs of the rural districts will often meet with opposition instead of hearty support. When the farmers in general come to realize that the church is an important factor in the price of lands, the happiness of the home, the social standing of the community, and an absolute necessity in the development of noble young men and women, then, and then only, will they be willing to make the sacrifice and pay the price sufficient to bring about such conditions which assuredly will make this old world a better place on which to live.





## The Philosophy of the County Fair

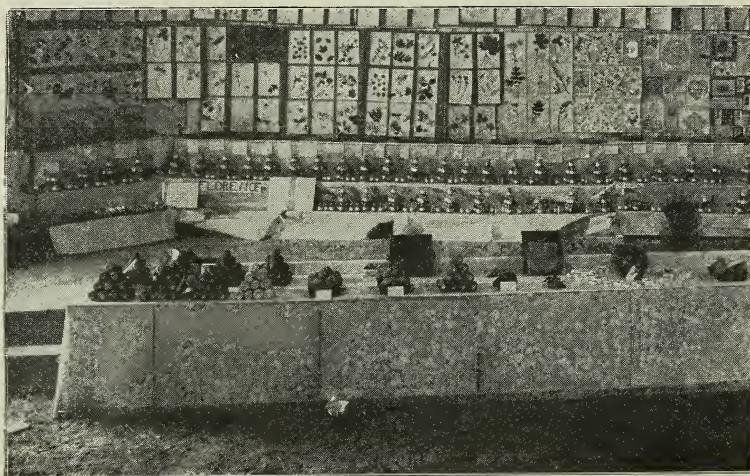
A. B. GRAHAM

Superintendent of Agricultural Extension

THE county fair should be an educational clearing house. Competition in displays only increase interest in the measure that the observer is assisted to understand the points of excellence taken into consideration by competent judges.

As far as is practicable a public display of entries in each department should be in an accessible place. The attaching of a blue or red ribbon often means little or nothing as to excellence

professional exhibitor, whose material is new each year, rather than to the professional exhibitor who holds over material from year to year because he has learned that a judge's eye can be caught. The professional exhibitor who purchases material from different persons with the hope of working it into a blue ribbon winner should not be given preference over the grower or manufacturer of the product. Some of the greatest premium winners have



HOME GROWN OBJECT LESSON.

unless the observer can easily learn if desired whether or not there is any competition in the same class. Would not a card stating "No competition" help to encourage other exhibitors as well as assist in giving the proper rating to the article exhibited? The withholding of premiums and red or blue cards from exhibitors not showing material worthy of premiums will secure exhibits of a better class. A larger number of exhibitors from the county should be encouraged by giving more attention to the non-pro-

been professionals whose winnings did not represent the actual producer. "Exhibited by the Producer" should have some consideration in making up premiums or in Fair Board rules for judges. Often the exhibitor purchases laurels, not from bribery but from buying a winner. The man of less means realizes his inability to compete, so he stays out. "Home Grown" should have greater encouragement.

Judges should render an account not only to the secretary, but to the exhib-

itor; a certain time should be designated when a few exhibitors in any one class could have discussed very briefly some of the more important points. More care would be given by the judges and more exhibitors would be convinced of the sincerity and qualification of the judge. The day has come when the observer as well as the exhibitor desires instruction. The different departments of the county fair are teeming with object lessons if only the judge or some competent instructor would cause them to be noticed and impressed upon the observer. The manufacturer does not always send his product to the fair to win ribbons. What he desires most is to have an opportunity to explain the excellence of his machinery or product, so show how the apparatus is operated, etc. In other words, his mission is largely one of instruction.

Fair Boards are gradually turning toward a higher and cleaner class of entertainment. Even though a defense

for questionable entertainment may be made in the occasional remark, "everybody must be entertained," it is the slightest and flimsiest defense. Clean entertainment should and will be encouraged that it may elevate to higher entertainment.

Perhaps to advocate a "horseraceless" county fair would not be received with any degree of approval. It can be said without fear of denial that a few county fairs are "no more" because of the excessive expenditures on premiums on horse races and very little on agricultural and domestic art products. Premiums on these products should be in keeping with those offered on the race course.

Larger exhibits of articles raised or produced by the young people will arouse a new interest in the county fair. Gate receipts and loyalty to the Fair Board will be attested by the presence of all the fathers, mothers, aunts, uncles, etc., of every youthful exhibitor.





## The Experiment Station and the Farmer

R. C. E. WALLACE

Department of Soils, Ohio Agricultural Experiment Station

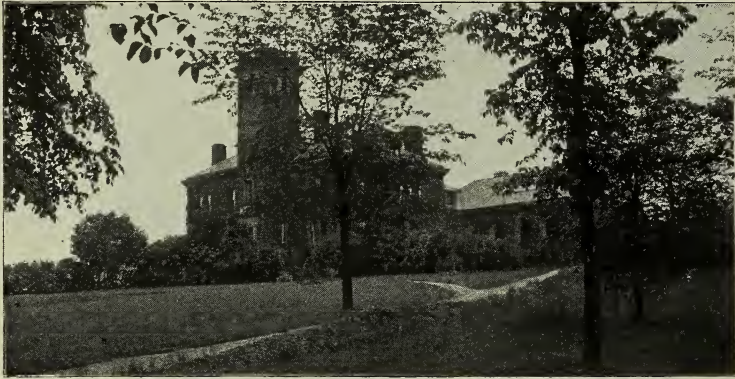
**T**HE Ohio Agricultural Experiment Station was established in accordance with an act of the General Assembly, approved April 17, 1882, "for the benefit of the interests of practical and scientific agriculture and for the development of the vast agricultural resources of the state." At the time of its organization, the Station was housed in two small rooms in the Chemical Building of the Ohio State University. One room was used as an office and

use of tools, farm machinery, etc.

Such, in brief, is the condition in which the Ohio Experiment Station found itself at the beginning of its existence.

Today, twenty-nine years after the passage of the act providing for its establishment, Ohio has an agricultural experiment station second to none in the world.

In the scope and character of its field work it probably stands at the head;



MAIN BUILDING, OHIO EXPERIMENT STATION.

writing room; the other as a seed laboratory, weighing and storage room. There was practically no equipment in the way of chemical or other apparatus, and the Station was entirely dependent upon the State University for laboratory facilities and scientific help. The University also very graciously donated the free use of a field of seventeen acres which should be wholly devoted to experimental purposes. The Station had the privilege also of conducting such experiments upon the University farm as the Board of Control of the Station saw fit to permit, and it was entirely dependent upon the University for the

and in general, in all lines of agricultural investigation none surpass it.

From the modest beginning which has been noted, the Station has grown and added new lines of work until now it has nearly 1300 acres of land upon which experiments are being conducted in different parts of the state. Out of the total acreage the Station owns over 1000 acres in fee simple. In land, buildings, live stock, farm machinery and scientific apparatus there is an aggregate value of upwards of \$250,000, and at the present time the pay roll contains the names of nearly 200 persons. Many questions of direct practical value



to the agricultural interests of the state are now in process of investigation. Methods of maintaining and building up the fertility of the soil; the improvement of farm crops; the care and management of orchards and gardens; the feeding of live stock and the production of dairy products; sheep and wool investigations; the control of insects and plant diseases; the nutrition of animals; greenhouse management; studies in forestry, rural economy, etc., are

either felt the need of them or are not aware that they are obtainable. It hardly seems probable, however, that only 40,000 farmers in the state would have become aware of the Station's purposes and work during the 29 years of its existence. We are therefore forced to the conclusion that at least the greater majority of this number are careless and indifferent in regard to bettering their own condition. This fact seems all the more startling when we



FIELD SCENES AT OHIO EXPERIMENT STATION.

some of the problems that are being worked out at the Experiment Station for the sole benefit of the farmer, the stockman and the gardener.

The results of the Station's work are published at irregular intervals in the form of bulletins. These bulletins are supplied free of cost to every resident in the state of Ohio who will take the trouble to ask for them. Up to the present time approximately 40,000 farmers out of a present total of 271,000 have considered it worth while to avail themselves of these publications. The remaining 231,000 apparently have not

realize that during the past decade the average yield for the state has been approximately 14 bushels of wheat, 35 bushels of corn and 35 bushels of oats. There are a lot of farmers who are responsible for keeping these yields at such outrageously low figures, and it is a safe gamble that the ones who bear this responsibility are not those who have availed themselves of the assistance to which they are entitled from the Experiment Station and the College of Agriculture.

By applying some of the lessons learned from the small plot tests to actual

farm practice on a large scale, the Experiment Station has been able, as an average for a considerable number of years, to increase the yield of corn from 31 to 73 bushels; the yield of oats has been increased from 35 to 55 bushels; that of wheat from 11 to 35 bushels, and that of hay from 1 to 3 tons. The cost of producing this increase has been the systematic use of 10 tons of manure per acre every four years and an expenditure of \$14 per acre for lime and fertilizers for the same period in a rotation comprising one year each of corn, oats, wheat and clover. The total value of the increase for the entire four-year period, including straw and stover, has been \$62.00, leaving a net gain therefore of \$48 for the four crops of the rotation, or \$12.00 per acre for each crop each year.

The yields and money returns indicated above may to some appear unusual; but there are many of the more progressive class of farmers who are securing even better yields, and thousands more could do at least as well if they would take the trouble to become acquainted with their business.

By keeping the stable manure under cover and re-enforcing it with 40 pounds of floats or acid phosphate to each ton of manure, the Station has succeeded in increasing the net value of the manure from \$2.60 to \$4.80 per ton. And yet I suppose that probably 75 per cent. of all the manure produced in Ohio is thrown into an open barnyard where at least 35 per cent. of the plant food contained is lost by leaching and fermentation before it reaches the land at all. The careless and indifferent methods practiced in caring for the farm manure alone are responsible for the loss

to the farmers of Ohio of hundreds of thousands of dollars worth of fertility every year. The low average yield of crops in Ohio can be ascribed to no other reason than indifference on the part of the husbandman. England is producing nearly three times the average yield per acre of practically all farm crops than we do in this country, although her soils have been under cultivation for a much longer period than have ours.

What the average American farmer needs today is not only instruction but inspiration to higher ideals in his calling. He must learn to think and reason for himself, and to take advantage of the opportunities provided if he would establish a profitable and permanent system of agriculture. He must study his soil. He must attend carefully to the selection of seed. He must also so acquaint himself with the question of fertilizers that he can intelligently buy and apply the same to his soil. The Experiment Station stands ready to advise and assist in all these and other farm problems whenever it is possible to do so, and it is up to the farmer himself whether he secures this assistance or not.





## The Grange as a Factor in Farm Life

ALFRED VIVIAN, Ph. G.  
Professor of Agricultural Chemistry

**P**ROBABLY no organization, during the last two decades, has had greater influence in the improvement of agricultural conditions, than has the Grange, or, more accurately speaking, the Order of Patrons of Husbandry, and certainly no organization of rural forces has before it a more promising future.

The Grange is peculiarly fitted to be an influential factor in the great rural

for a moment doubt, for its part has been one of conservative progress, but **progress** nevertheless, and it has to thank this progressive conservatism for the fact that it alone, of the many farmers' organizations, has stood the ravages of time.

Founded in the first place upon broad ethical principles, standing always for man's best nature, emphasizing the im-



"SOME DAY I'LL BE A GRANGER."

uplift movement which is now the talk of everyone who is interested in any way in country affairs. What the Grange has already accomplished amounts to only a hint of its future possibilities, for in this organization rests the power to accomplish for the farmer many desirable things which can be acquired only through this or some similar organization. That the Grange will rise to its opportunities those who are best acquainted with its history do not

portance of morality, education, kindness to others, it has come down unscathed to the present generation, although at times threatened to be wrecked on the shoals of selfishness of some of its members. It has lived through the dreaded "boom period" that infantile disease likely to attack all new organizations, has survived the second summer of reaction after the boom, and today is in a remarkably healthy condition both as to membership and

finances. That it is by no means full grown is testified by the enormous increase in number of granges and in membership during the last five years. That the next five years will see even larger growth is the confident expectation of those who are best informed as to the merits of the cause which the Grange espouses.

The men most prominent in the new Rural Uplift movement aver that among the things most needed for the improvement of farm life these three stand out prominently, viz:

- (1) Better social conditions,
- (2) Education,

in their eyes. They do not until late in life realize that what they see is the froth and not the cream of good living. All this the Grange tends to correct, for it is first of all a social organization. Many of us believe that the social principle so strongly emphasized by the Grange is undoubtedly its most important feature. The Grange opens its doors to the farmer, his wife and children, giving each a voice in its affairs and offering to each something of personal interest. Where a good live Grange exists it becomes the social center of the community. The Grange meetings bring together neighbors who would seldom



JUVENILE GRANGERS.

- (3) Business co-operation.

All these are cardinal principles of the Grange.

Man is a social animal. He craves the company of others of his kind. It is only the exceptional man who is in any degree sufficient unto himself and who can find in his work, and his books and in Nature, all the companionship he needs. Thrice happy is such a man, but he is the "rara avis" of mankind. The isolation of farm life, the lack of social intercourse, is undoubtedly one of the most important factors in making the young people, especially, dissatisfied with farm life. They long for companionship, and the social side of urban life comes to assume unmerited importance

meet otherwise, and forces isolation from the saddle.

The Grange meetings themselves, if properly managed are social functions of untold importance to a rural community, but better yet, the social friendships and good times of the regular meetings lead to parties, picnics, and other affairs which give an entirely different social tone to the neighborhood. It is a matter of common observation that the young people in a farming section containing an active Grange, in which youth is well represented, are more contented than those in a community where the Grange influence is lacking.

The Grange has always stoutly advo-



cated the education of its members along the lines of their own life work. The constitution and the ritual of the order emphasize repeatedly the importance and necessity of education. Through its programs it has itself accomplished much in the way of education, and the lecturer, whose duty it is to prepare the programs, has in many Granges become a more important personage than the Master himself. But it is not only through its own programs, important as they are, that the Grange

in its public action as well as in its private teachings has always been on the right side of every moral and ethical issue. Non-political in principle, it has fought for all the great moral reforms of the country, regardless of party or party politics. Non-sectarian constitutionally, it is distinctly religious in character, its ritual and teachings ever keeping before its members their dependence upon the Supreme Being.

The farmer is notoriously slow to cooperate. His very isolation, in part, has



YOUNG PATRONS AT THE FAIR.

has advanced the cause of education. The order has always been found on the side of better schools of all kinds.

It has been a staunch friend of the Agricultural Colleges, of the Farmers' Institutes, and of all agencies for the dissemination of knowledge. In many places the local Grange has provided public lecture courses, has conducted institutes, has been the center for correspondences courses, and in divers ways has taken an important part in the intellectual uplift of the locality. No education is complete that does not include a comprehensive understanding of things moral and religious. The Grange

made him self-dependent and self-reliant, and it is not strange that he should in many cases look with suspicion upon schemes of co-operation, or even be somewhat jealous of leadership. Yet co-operation among farmers to a certain extent must come and the Grange offers the best organization to bring it about. Working together socially and educationally will have the tendency to remove suspicion and distrust, and the inevitable result will be co-operation in business as well. While the business side of the Grange is of least importance, there is no reason why advantage should not be taken of the opportunity

to get lower prices on certain staple commodities, by buying in large quantities, and where an entire community is engaged in raising the same product there is no reason why co-operative selling should not be as advantageous as co-operative buying.

The Grange has always stood for the best things in rural life. It already has a membership running into hundreds of thousands and is steadily growing. It is not too much to prophecy that it will

continue to increase as an influential force in rural advancements. So long as its members keep constantly in mind the great ethical principles advanced in its ritual and constitution, it is not hard to believe that the ambition of the Grange to take its place beside the school and the church, as one of a trinity of forces that shall mold the life of the farmer on the broadest possible basis—material, intellectual, social, and ethical—bids fair to be fulfilled.



“THE GRANGE STANDS FOR THE BEST THINGS IN RURAL LIFE.”



## The Dairy Cow in Ohio

O. C. CUNNINGHAM, B. Sc.  
Assistant Professor of Dairying

FROM the most reliable figures obtainable at the present time it is shown that the average cow of Ohio produces about one hundred and fifty-six pounds of butter per year. If we suppose that this butter is sold for twenty-five cents per pound, we find the income from this cow to be \$39 per year. At the present prices for feeds the cost of feeding a cow for one year will be at least fifty dollars. This

It explains why we so often hear that "dairying does not pay," or "there is nothing in dairy cows." There is nothing in any business for the man who is below the average.

We may ask, why will men keep cows that are unprofitable? In most cases it is because they do not know that they are unprofitable. There is no record kept of the amount of butter or milk produced by the animal or of the



"BESIDE THE STILL WATERS."

means that a cow must produce two hundred pounds of butter at twenty-five cents per pound to pay for her feed for one year.

The average Ohio cow, then, does not pay for her feed if she is charged for same at full market prices. If the average cow, of the thousands in Ohio, produces only the unprofitable amount of 156 pounds of butter, there must be thousands that are even less profitable. It seems almost beyond belief when we say that the average cow producing milk and butter in Ohio is not profitable.

amount and value of the feed consumed. It may be said that even if the cow is not giving a product that will show a profit over the value of food consumed, that she is keeping up the fertility of the farm through the great amount of manure produced during the year. It is true that she is doing that and doing it more effectively than any other farm animal can do it. Furthermore, as time goes on and the soils of this great state continue to be depleted by cropping methods, she will be depended on more and more to bring back and keep up

the fertility. But that does not justify milking and caring for her just for the pleasure of those operations.

Thus far we have spoken only of the average cow of Ohio and her sisters who are below the average. There must always be an average cow and some below the average, but it is not to them that we may look for any good to this fair state. The more of them we can get rid of the better it will be.

How are we to rid our state of the unprofitable cow and raise the stand-

than 400 pounds of butter per year, many of them much more.

A pure bred dairy bull, himself a good individual and from a high producing ancestry, at the head of every dairy herd in Ohio would do more than any other one thing in bringing up the standard of the average Ohio cow.

Hand in hand with good breeding must go careful selection and the weeding out of poor individuals from the herd. This can be done, in part, by retaining heifers of good dairy type, but



“THE DAIRY COW IN OHIO.”

ard of the average cow? In the first place, by good breeding. Ohio has great reason to be proud of the many high producing, pure-bred dairy herds being developed within her borders. It is a highly important fact that the cows in many of these herds are being given official tests as to production which will be of special significance to those wishing to secure pure bred males from them. Approximately six hundred pure bred cows, given official tests within the past year, have shown themselves capable of producing more

most important of all is the performance. This can be determined only by the scales and the Babcock test. They can be made, and must be made, if we are to accomplish a start goal-ward in the shortest time.

These are the most important factors in bringing up the average of Ohio cows. If the Babcock test seems out of the question, the scales should at least be used. Of course, it takes a small amount of time to weigh milk, but only a very small amount, compared with the profit therefrom. And then, when





“A HIGHLY PROFITABLE ONE.”

one becomes accustomed to it, the trouble is very slight.

Along with good breeding and weeding out of poor cows must come better feeding methods. More attention should be given to the cost of keeping individual cows. Perhaps the greatest improvement along the line of feeding will

be the greater use of silos to furnish green, succulent material for winter. The silo is equally as important to tide over the dry season of the late summer.

Let us work for the early coming of the day when the average dairy cow of Ohio will be a highly profitable one!



OHIO DAIRY PRODUCTS.

## Draft Horse Breeding by the Corn Belt Farmer

W. S. CORSA

Proprietor Gregory Farm. Whitehall, Ind.

**T**HE draft horse is the logical horse for corn belt conditions. The proper tilling of the soil, and the scarcity of farm labor require power for the large and larger machinery devised to perform the most work at the least expense for manual labor per acre of ground, or bushel of grain. This evolution of agricultural machinery to the large model has been rapid and widespread until in the West powerful tractors are in common use. There the climate and soil and extent of ground to be covered point to the use of such massive machinery, but in the corn belt, upon the majority of farms, and in the general run of seasons, the draft horse will prove the most economical source of power in producing our crops for some time to come.

In the corn belt we don't breed draft horses to cultivate fruit, nor to raise cotton, but wheat, corn, oats, clover, alfalfa, the very best feeds to develop the draft horse to his best estate. It is a weakness of human nature to feed more liberally when you raise the feed than when it is brought in over the railroad. Draft horses, for their proper development, require generous feeding. So that nowhere else in all the country are the natural conditions for developing the draft horse so favorable as in the corn belt.

The custom and training of the corn belt farmer is to handle stock in bunches. The kindly disposition of the drafter, his quiet, friendly manner, his peaceable ways with those of his kind, as well as other kind, and mankind, enable him to fit in most acceptably with the prevailing methods, and equipment on a corn belt stock farm. As with cat-

tle, you can double the average bunch of draft horses and practically the only expense you have doubled is the expense of feed. Here is an economic feature which has enterprise. At home we have a two cent parrot in a \$20 cage, but a bunch of somewhat valuable draft mares went all winter and never saw the inside of a barn. An hour's chill would do up the parrot, but whoever heard of a draft horse, that had plenty to eat, freezing to death in the corn belt? Woodland blue grass pasture and grain twice a day, and today 21 colts saved out of 22 foaled, a result due in no small measure to abundant out-of-door life and plenty of feed.

We overlook our hand when we fail to remember that the horse is an out-of-doors animal, that the corn belt furnishes a well nigh perennial and salubrious out-of-doors for the drafter at a minimum expense per head for equipment.

There has been, and is, much argument as to whether there exists such an animal as a "Dual Purpose" animal. Permit me to lead forward a corn belt draft mare and mark her for "Exhibit A." She produces the crop which sells for cash and a colt which from weaning time on may be transmuted into more coin than the average individual offspring of any farm animal of the same age. Jane produced \$1400 worth of colts and Daisy \$900 worth and performed their full share of labor on the crops. Later, branded by wire, and marked with age, they sold for approximately their original cost. The depreciation in the power plant of the corn belt farmer is at a minimum when the units are drafters, and when the



units are draft mares, it is the only power plant I know of that renews itself while producing profitable labor. Many corn belt farmers have their own good grade draft mares, Jane and Daisy, and these mares have been busy.

The corn belt farmer wants to awaken to the use of only pure bred draft stallions and to the necessity of increasing the number of such stallions in every community, to the exclusion of the mongrel and the scrub.

as the seed bed of the draft horse industry.

Other lands are casting eyes toward the United States for breeding stock of the beef breeds of cattle. Breeders of dairy cattle are at this very time anticipated the production in America of the choicest specimens of their favorite breeds. Already we have distanced foreign lands in the production of ideal types of swine. It is possible, that having drawn to this country for years the



But the call of the times is to the pure bred as never before. The expense of maintenance is the same, the labor of the pure bred is equal or superior of the grade. Lineage is no license to loaf in either man or beast, and the profit and pleasure of breeding pure breeds is incomparably greater. The pure bred drafter on the corn belt farms spells better farming, better fencing, practical elimination of the barb wire, and the barbarian scrub, and the maintenance of our heritage unimpaired

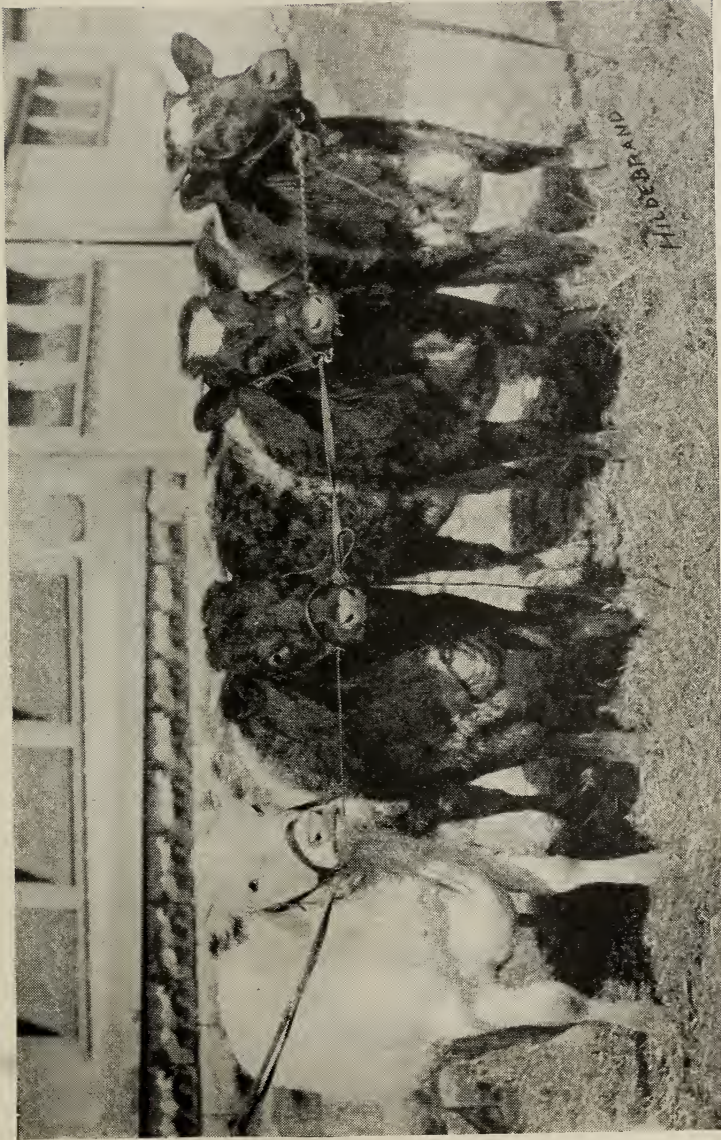
highest and best individuals of draft horses that the day will not come when the draft horse in the splendor of his massive form, graceful and symmetrical outline, will not be sought for in our own country by our own breeders and the breeders of foreign countries? It would be an indictment of the intelligence and perseverance of our people to deny it, and when that day arrives, the drafter of our ideals, and our dreams will be found on the land of the Corn Belt Farmer.



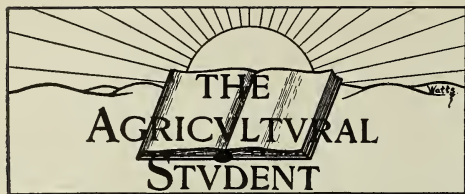
A CHAMPION AND—

Courtesy of Thos. Johnson & Sons.





—A SIRE OF CHAMPIONS. Courtesy of Thos. Johnson & Sons.



OF  
OHIO STATE UNIVERSITY.

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A Monthly Magazine Devoted to Agricultural  
Education.

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Published by the Students in the College of  
Agriculture.

Established, 1894.

Subscription Price, 75 Cents the Year.

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**COLUMBUS, O., SEPT. 15, 1911.**

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## Editorial

We are dedicating the initial number of the academic year, 1911-12, to "The Ohio State Fair," the mighty **THE** institution of competition and **ISSUE.** blue ribbons and renewed acquaintance and object lessons galore. By presenting at this time a double number, a holiday edition, we are hoping to materially broaden the scope of our influence, to acquire new friends for our magazine, and to in many ways better accomplish our purpose of making Ohio people better acquainted with their College of Agriculture and the principles for which it stands.

In 1819, General William Henry Harrison was elected president of the first distinct agricultural society in the state of Ohio. In 1846, the **THE FAIR.** Ohio State Board of Agriculture was organized, and in 1850 launched the first state fair at Cincinnati. Until 1874 the Ohio State Fair was a moveable institution, the cities of Dayton, Toledo, Springfield, Mansfield, Franklinton, Newark, Zanesville, Sandusky, and Cincinnati having been "dignified by its presence." Since 1874 the fair has had a permanent home at Columbus.

From its early beginning the Ohio State Fair has had a marvelous growth, until today it stands in the category of agricultural expositions of its kind without a peer. The pride of the native Buckeye wells up strongly at mention of this grand event. As an educator of her agricultural peoples the State Fair should assume a high rank among those institutions devoted to the propaganda of "The New Agriculture." Let us, people of Agricultural Ohio, do our part in encouraging the growth and influence of The Ohio State Fair.

In presenting this issue to the public we are greatly beholden to a score of individuals who have so kindly stretched toward us the hand of friendship, appreciation, and material aid. To those magnanimous men who have contributed articles to this issue, mere words are totally inadequate in expressing the thanks of both the staff and our host of readers.

For many of the illustrations in this issue we are likewise greatly indebted to the State Board of Agriculture, to our own University Editors, to McLaughlin Bros., and to Thos. Johnson &



Sons. The co-operative spirit is profoundly appreciated.

When C. W. Burkett, '95, took up his editorial quill in 1894 to define the objects of "The Agricultural Student" he "builded better than **THE AIM.** he knew." He launched forth upon the sea of journalism the pioneer, the trail-blazer, among agricultural college publications. Among the objects set forth in that first editorial we find these words, "To bring the University and especially the School of Agriculture into closer and more friendly relations with the people, especially the farmers of the State, by better acquainting ourselves with the people and setting ourselves and our work, fairly, freely and openly before them."

We now begin our eighteenth volume. Glancing back through the vista of years we see this paper striving, endeavoring—always to fulfill a purpose, to carry a message, to voice a vision—a vision of a rural people emancipated through science. Likewise shall the present staff endeavor to preserve the integrity of the aim as first set forth, to strive to more fully acquaint a great people with their great University and its great works.

This periodical belongs to the students of the College of Agriculture. If its policy and make-up are not satisfactory, tell us; if they are, **WHOSE PAPER?** tell your friends. A boost for your paper means a boost for your College and yourself. Criticisms and suggestions alike will be gladly received. If you have no other specific business, come around and give us a word of good will and good cheer. Or, if you, fellow student, wish to be of a more practical turn, write us an article, submit a photograph, turn in an extra

subscription, or put us on the trail of a good contributor. Whatever it may be, we await at the door of our sanctum to grasp your hand!

In sincerely striving to fill the niche carved out for us by the skilful hands which have preceded us for these 18 years, we shall be disappointed if any student in the Ohio College of Agriculture does not feel enough interest in his chosen work, his alma mater and her institutions to grant us the aid of his subscription, the benefit of his candid opinions and suggestions, and the inspiration of his friendship.

The financial responsibility of the production of its organ, is by virtue of the constitutional prerogative of the **OUR ADVERTISERS.** Agricultural Society, thrust upon a few of its members. Upon our advertisers are these men in turn dependent to pilot the bark safely through to the pier of "achievement well done." It has always been our policy to discriminate carefully as to who advertise in our columns. Rigid adherence to this has given us a coterie of advertisers leaving little to be desired. Every one is guaranteed to be reliable. Give them a trial, tell them you "saw the ad. in The Student" and thereby give us a boost as well as yourselves a bargain!

The latch string to the suite of rooms occupied by "The Student," in the top floor of Ohio Union, is always out. Here we are **THE OFFICE.** ready and anxious to see our friends and co-workers in the cause of better Agriculture. Come in and let's talk over matters apropos to the good of the magazine.

The Agricultural Society has found it both necessary and advisable to raise the price of this periodical **THE** to seventy-five cents per annum. Other college papers of similar merit regard one dollar as the proper emolument accruing to their management for producing their publication.

Our magazine has seen a considerable increase in the number of its pages during the last year, and we hope the same year has seen an equal increase in merit. In order to continue producing a creditable publication—creditable to the University, the students, the state, and the agricultural vocation—the above action became imperative.

One finds a great many societies in an institution like our own University.

Whatever the merits of **SOCIETIES.** the others, it seems to us that every loyal Agricultural Student should be actively identified with two of special moment to all—The Agricultural Society and Townshend Literary Society. Both have weathered the storms of many winters, have stood the test of the years. Broad in scope, profound of purpose, these two societies will materially benefit any man who joins and “keeps the faith.”

Gentlemen of the First Year, “The Agricultural Student” greets you! You are just now on the eve of a new era in your life, **TO THE** of a new era in your life, **FRESHMEN.** a university career! A great commonwealth and a mighty nation have provided a great institution for your benefit, and in the act of matriculation you assume a definite responsibility “to make good,” to conduct your affairs in an exemplary fashion, and to be a leader for a higher type of citizenship.

Be loyal to your college! Develop college spirit! Boost! Subscribe for your college paper! Each and every loyal student in the College of Agriculture supports his paper. You must do so if you are to be considered a real, live, “worth while” member of the college. To go through college without becoming a living, vital force in her institutions is to suffer an irretrievable loss. Therefore **subscribe now**, join the Agricultural Society, start right!

The intense activity exhibited on all sides, toward the one end of bringing agricultural education within the reach of all, is truly **LOOK** in the reach of all, is truly **WELL.** exhilarating. And every movement faithfully aimed toward the goal of increased crop production, or the betterment of rural conditions should receive the hearty support and commendation of all who purport to be the friends of the farmer. But as in all progress so rapidly accomplished, there is danger—danger from two sources. In the frenzied rush, new and untried projects and revolutionary methods are likely to be introduced without mature consideration and without sufficient grounds for the assumption that they will succeed. Under these conditions many of the projects must fail, and each failure casts a shadow of suspicion and disrepute upon the entire movement. All revolutionary plans of reorganization, etc., should receive mature consideration and, if possible, be tried out on a small scale before being put into general practice. And above all should we give credit to methods and organizations which have so successfully reared Agricultural Education from its recent infancy to so healthy a growth.

The second danger arises from the possibility of political taint from with-



in. Any movement which has for its end, pure and worthy ideals and which is actuated solely by a desire for the betterment of mankind, or any large portion of mankind, must succeed. But many a worthy enterprise has been wrecked by a substitution of personal ambitions and political ends, for the higher interests of the people as a whole. Let us, as students, observe the signs and guard against any such substitution.

O. M. K.

Many good things are in store for our readers dearing the year. Many interesting notes are expected from Dean

**ANTICIPATION.** Price and Prof. Lazenby while abroad. Men with love of Ohio State in their hearts are now residing in the four corners of the globe. We expect some interesting notes from alumni in India, Japan, South America, etc. The series of articles on "Opportunities," of which Dr. Thompson fires the opening gun in this issue, promises to be of great value and interest. The special issues which are planned should prove to be most worthy ones.

Would that we could call the attention of every ruralist in the State of Ohio to the article by Rev. Mr. Richards on "The Ruralist and Religion!" It assuredly strikes the keynote of the most vital problem in our rural districts today, the regeneration of the church and placing it in its proper place, the lead in solving the moral and social problems of the open country.

That the work of evangelization in the country is not what it should be few

can doubt who have a real live acquaintance with rural affairs in the great majority of our communities. The church must regain its grip. Then will we have a happier, cleaner, and a more wholesome countryside.

The lesson seems plain and the path to the goal clear. Country ministers must be versed not only in theology, but in country lore. They must receive a special training. Once let our theological schools join hands with our agricultural colleges for the accomplishment of the new ideal in country ministry, and the dawning of a new era will not be far distant.

Vacation joys are now but fond memories. As we again (or for the first time) enter the portals of the great Institution of Learning, with ruddy

**VACATION JOYS.** cheek, a brightly eye, a springing step, a vim to give the best there is in us in return for the best philosophy and science and culture have to offer, the joys of vacation days will continue to linger and mayhap make us happier, sprightlier, brighter students. The smell of the woods, the breath of the furrow, the ripple of stream, the touch of the soil, the shimmer of moonlight, the odor of farm kitchen, the joy of living the life—the only real life—of a ruralist, shall we not often do well to invoke their memories amid the hustle and bustle and rustle of classroom and school hall and street? 'Tis the old story, the plea to let the lessons of Nature—may our college career lead us to a nobler appreciation of her true worth—lighten our burdens and so make our lives sweeter, nobler, better. Thus may not sweet memories constitute the greater half of our vacation joys?



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## NEWS NOTES

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Dean Price left for his trip abroad during the last week in August. He will make quite an extended tour and will visit many points of interest both historically and agriculturally. The greater part of the year, however, will be spent in study at the University of Halle, in Germany. During his absence, Prof. Vivian will occupy the position of Acting Dean of the Agricultural College.

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Prof. Plumb has been the prime mover in the organization of the American Kerry and Dexter Cattle Club, which will be devoted to the interests of this breed of cattle, fast growing in popular favor. The officers are as follows: President, G. M. Carnochan, New City, N. Y.; Vice President, C. H. Berryman, Lexington, Ky., and Secretary-Treasurer, Prof. C. S. Plumb, Columbus, O.

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The summer school this year was the largest ever held at the State University, nearly eight hundred students being in attendance. The course in Agriculture for teachers of high schools, given by Prof. Bricker, was well patronized. A series of experimental garden plats was planted and cared for by this class and some very interesting results were obtained in spite of the excessive amount of hot, dry weather. The class, before disbanding, organized the "Association for the Promotion of Agricultural Education in Ohio," with Prof. Fries, of Grove City, as its president.

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The subject of Plant Breeding is demanding greater attention than ever, and promises to be given greater attention at the University than in the past.

During the last week of July the Extension Department held a conference of country ministers at the University. The object of the conference was to discuss the problems of the rural church and to plan means of bettering the condition of the same. A state-wide movement was started to ultimately bring about the union in the various communities, of the several weak, struggling churches into centralized churches which would be a power and an influence in the community. Considerable interest was shown in the conference and arrangements were made for a much larger conference next year.

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Prof. F. E. Bear and Prof. O. M. Johnson returned from their trip abroad early in the summer. They visited the southern European countries besides giving special attention to Germany and England. They reported a very pleasant and extremely profitable trip.

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Prof. J. Warren Smith, section director of the weather service, has been appointed Honorary Climatologist of the Experiment Station. George H. Coffey, of the Bureau of Soils, has accepted the position of assistant in the department of co-operation and will be engaged in a field study of the soils of the state.

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Prof. C. H. Goetz takes great pride in his 2½ acre forest nursery. Some interesting experimental work is being conducted with both evergreens and deciduous varieties and with hard and soft woods. Many commercial varieties have been received from Nebraska, New Mexico, Wisconsin, Michigan, New York, Pennsylvania, and Ohio.



## ALL ABOARD! AGRICULTURAL SPECIALS.

The most extensive educational campaign ever conducted by special railroad train is now in progress in Ohio under the direction of the College of Agriculture of the Ohio State University. It began July 31st, when a dozen instructors from the College, under the supervision of A. B. Graham, Superintendent of Agricultural Extension, left

run over the Hocking Valley and the T. & O. C. in the near future.

Teaching agriculture by special train is growing in popularity and the big railroads of the country have, for several years, been co-operating with the state colleges of agriculture in promoting this method of spreading the gospel of better farming. However, this is the first time that as many as six big railroad companies have joined hands with any college to carry out such an exten-



Columbus on a special train of three coaches, a baggage car and an engine, via the Big Four, to give farmers along that line the latest and most reliable information concerning soil improvements, wheat culture, seed corn selection, sugar beet growing, and dairying. Since that time an "agricultural college on wheels" has traveled over the lines of the Nickel Plate, C., H. & D., and P., C., C. & St. L, besides the road already mentioned, covering in all nearly 2400 miles and reaching the farmers of all parts of the state. So successful have these tours proven that plans are now in process of completion for trains to be

sive campaign, embracing as it does nearly five weeks of instruction. It is estimated that over 30,000 farmers will hear the lectures. During the first week of the tour nearly 9000, by actual count, met the train at the various stops.

The instruction is given on board the train in cars especially equipped for that purpose. When the train pulls up at the station, the crowd which is waiting for it is quickly taken aboard and comfortably seated. Within five minutes the lecturers are busy—one in each car—each giving the same instruction, so that no matter which car the farmer gets into he hears the same lectures, or

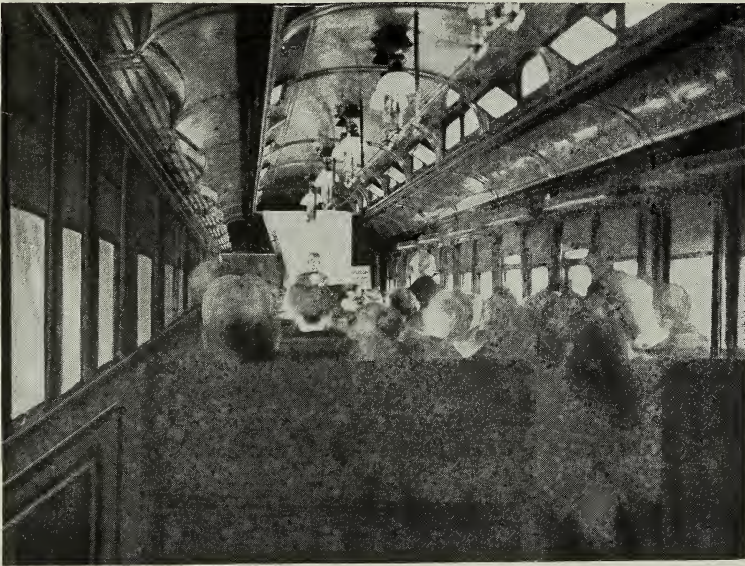
at least the same subjects discussed. The lecturer uses enlarged photographs and charts to illustrate his talk and he makes the talk as practical as possible. The first man talks for a certain portion of the time and then steps aside and the next man talks on the next subject. In this way farmers are given from two to three practical talks during the hour and a half of time that the train remains at each place.

At the end of the lecture, illustrated

### FORESTRY MEN AT WORK.

It is the policy of the Forestry Department of Ohio State University to send out its men into the field for practical work, during the summer vacation. This practical experience is of untold value when coupled with the work done in the class-room.

During the summer of 1911, six men worked in the Forest reserves of California, three were in Utah, three in Mon-



literature dealing with the subjects discussed in the lecture, is distributed as the crowds come from the train. This enables those who have heard the talk to read the same information at home and give it longer study.

Last year similar trains were conducted over several roads which carried instruction to 16,190 people. This year's campaign is much more extensive, however, and covers a much greater area and a longer period of time. In this work Ohio proves both a pioneer and a leader.

tana, one in the New York Adirondacks. Two worked for the State of Ohio in the Experiment Station work, two men worked as tree surgeons with the Davey Tree Surgery Co. Three men worked in the lumber camps of Michigan, while four men did the same kind of work in Virginia. One man taught forestry and athletics in a summer school camp in New Hampshire.

While the men are not forced to work in such positions, yet they are advised to do so, and positions are looked up for them.



Positions in lumber camps have been very plentiful, that is, there are more positions than there were men, who cared to get such an experience.

It is the policy of the Forestry Department to give to the upper classmen the more responsible position, and the ordinary work, where no skill or training is required, to the lower classmen.

The teachers in the department have also been out getting more experience. One is still out on his travels around the world studying forestry, and the other, after two months in the U. S. Forest Service in Montana, has returned to take up the work for the year 1911-12.

The 31st annual meeting of the Farmers' National Congress is to be held in Columbus, the week beginning Oct. 12. Many noted and entertaining speakers are on the programme, which may be had by writing to C. F. Sanford, Vice President, London, O.

Mr. Frank T. McFarland, '12, and Mr. Forest Brown, a Michigan graduate, now affiliated with the Department of Botany, have been carrying on some very interesting work this summer in the way of plant breeding. Mr. McFarland has been doing his work principally with corn, oats and soy beans, while Mr. Brown has been working with husk tomatoes, tomatoes and cucumbers.

Our readers will be interested in knowing that a new wing is to be added to the main building at the Experiment Station.

A sulphur spring sufficiently odoriferous for the most fastidious was struck last week by the drill at the north end of the campus. 'Tis whispered that it will be converted into a resort for freshmen soon after school opens.

## STATE FAIR JUDGING CONTEST.

The contest at the State Fair this year is of more than usual interest. Besides the regular cash prizes, Mr. W. K. Shoepf, President of Ohio Electric R. R., has most generously agreed to take the twenty leading participants (who must be members of the Saddle and Sirlain Club) on a free excursion over the state to the prominent stock farms which abut the Ohio Electric road. All aboard!

The extreme north end of the campus is the scene of considerable activity just at present. The Andrews Asphalt Paving Co., of Hamilton, which has the contract for paving High St., has temporarily located a modern asphalt mixing plant at that place and are now actively engaged in mixing their materials.

A new Agricultural magazine, "The City Farmer," published in this city, is now running in its third month. The magazine is devoted especially to the lawn and garden, but contains much of interest to the general farmer. P. W. Barnes, '11, is editor of the "Lawn and Garden" Department.

The board of control of the Ohio Experiment Station, acting conjointly with the boards of county commissioners, has located county experiment farms in Belmont, Paulding, and Miami counties under the Wilber law of 1910. The bonds voted for this purpose amount to \$20,000 each in Belmont and Paulding counties, and \$22,000 in Miami county.

R. R. Frye, ex. '12, is working in the University gardens. He has "forsaken the muse," however, and soon leaves to engage in market gardening for himself.

### THE AGRICULTURAL SOCIETY.

This society meets the first Wednesday in each month. If you are interested in good, wholesome, live discussions of timely topics and the management of one of the best managazines in the country—come out.

Prof. and Mrs. Vivian spent the summer among the mountains of Colorado. The greater portion of the season was spent at Colorado Springs, but Denver was an important place on the itinerary before their return the latter part of August.

### THE SADDLE AND SIRLOIN CLUB.

This club meets on the third Wednesday night of each month. Of especial interest to Animal Husbandry students. Get in, if you're a stockman.

C. M. Hiser, a two-year Horticulture graduate, is in the vegetable and greenhouse business with his father.

### THE HORTICULTURAL SOCIETY.

Watch the bulletin board for the first meeting of the Horticultural Society. Things of vast interest and great moment horticulturally await your approval at that meeting.

Mr. C. R. George spent a most profitable and pleasant summer with the world-famous Jersey herd at Elmendorf Farm, Lexington, Ky.

The ear to row and variety tests of corn are showing up well, notwithstanding the serious drouth early in the summer.

The Department of Agronomy is conducting a test this summer with sugar beets. The beets are showing up fine and promise a nice crop.

### GET READY!

#### Agricultural Extension Schools for 1911-1912.

Date.	County and Town.
Sept. 4-8 .....	Athens, Athens
Sept. 18-22 .....	Guernsey, Quaker City
Oct. 9-14 .....	Monroe, Woodsfield
Oct. 16-20 .....	Perry, Thornville
Oct. 30-Nov. 3 .....	Brown, Georgetown
Nov. 6-10 .....	Washington, Beverly
Nov. 13-17 .....	Pickaway, Williamsport
	Morgan, McConnellsville.
Nov. 20-24 .....	Gallia, Gallipolis
	Noble, Caldwell
No. 27-Dec. 1 .....	Vinton, Wilkesville
	Knox, Mt. Vernon
Dec. 4-8 .....	Fairfield, Baltimore
	Coshocton, W. Lafayette
Dec. 11-15 .....	Ross, Kingston
	Tuscarawas, Baltic
Dec. 18-22 .....	Highland, Hillsboro
	Wayne, Orrville
Dec. 26-29 .....	Hamilton, Cleves
	Carroll, Carrollton
Jan. 1-5 .....	Clinton, Wilmington
	Portage, Ravenna
Jan. 8-12 .....	Madison, London
	Mahoning, Canfield
Jan. 15-19 .....	Clark, Springfield
	Geauga, Chardon
Jan. 22-26 .....	Champaign, Urbana
	Ashtabula, Conneaut
Jan. 29-Feb. 2 .....	Hardin, Ada
	Huron, Monroeville
Feb. 5-9 .....	Hancock, Rawson
	Erie, Vermillion
Feb. 12-16 .....	Van Wert, Van Wert
	Seneca, Attica
Feb. 19-23 .....	Mercer, Rockford
	Sandusky, Fremont
Feb. 26-Mar. 1 .....	Lucas, Berkey
	Preble, West Alexandria
Mar. 4-8 .....	Miami, Covington
	Fulton, Delta
Mar. 11-15 .....	Dark, Palestine
	Putnam, Columbus Grove

Mr. Worman and Mr. R. D. George spent their vacation on the Government Morgan Horse Stud in Vermont.

The Physics Department at the University will scarcely be recognizable this year. Since Dr. Thomas' death, early in the summer, Mr. Sheard has gone to Columbia University to study for his doctor's degree, and Mr. Nusbbaum has accepted a fellowship at Harvard.



**GET READY.**

The next annual meeting of the American Association of Farmers' Institute Workers will be held at Columbus, O., November 13 to 15, 1911. At the same place and beginning November 15 will be held the annual meeting of the Association of American Agricultural Colleges and Experiment Stations.

Mr. Frank T. McFarland is judging corn and small grains at the county fairs this fall.

Kansas City, Mo., July 21, 1911.

The Agricultural Student, Columbus, O.  
Care Ohio State University.

Dear Sirs—Since its receipt, I have several times looked through and enjoyed the May number of your magazine. I have never seen a higher standard in the way of rural photographic illustrations than it shows unless possibly in issues of "Country Life in America."

Yours truly,

MISSOURI RURALIST,

By T. W. Morse, Editor.



When the burden of life I am called to  
lay down,

I hope I may die in Ohio.

I never could ask for a more glorious  
crown,

Than one of the sod of Ohio.

And when the last trump wakes the  
land and the sea,

And the tombs of the earth set their  
prisoners free,

You may all go aloft, if you choose, but  
for me,

I think I'll just stay in Ohio.

**TOWNSHEND LITERARY SOCIETY**

Townshend Literary Society meets on Friday evening of each week. Come out and get acquainted. Then to make your college education complete—join.

Many of our readers will be greatly grieved in knowing that Uriah Cook, for many years one of the leading fine-wool breeders in Ohio, has passed to the great beyond.

The new library goes skyward apace.



## ALUMNI



Mr. Ruth, '11, has been working out a thesis this summer on some of the relations of soil and climate to sugar beet culture in this section of the state. He is carrying on this investigation in co-operation with the local Board of Trade and a sugar factory of Bay City, Mich.

Mr. Homer C. George, '07, launched forth on the matrimonial sea on Aug. 15. The bride is the reigning belle of Okeana, O. L. M. Oyler, '10, acted as pilot in the capacity of best man. Their many friends at Ohio State join in wishing Mr. and Mrs. George "bon voyage."

Mr. Bachtell, '11, is employed by the Extension Department and has been lecturing all over the state with the series of Agricultural trains which the Department has been running this summer.

Richard Faxon, '09, and Roy Kelley are living in Montana. Mr. Faxon is Assistant Fruit Inspector for that state.

Wm. Bembower, '10, writes from Miami, Fla., where he is conducting some investigational work in the Bureau of Plant Industry's Sub-tropical Gardens. He sails for India in the near future, where he is to have charge of Horticultural work in Allahabad College. He promises an interesting article for "Student" readers before "many moons."

Mr. P. V. Ewing, '10, has accepted a lucrative position with D. R. Hanna at the famous Cottage Hill Farm at Ravenna, O. He has charge of the clerical and scientific work at this great breeding establishment.

W. F. Bruce, '10, is favorably situated at Artesia, Mex., as manager of a 150 acre orchard and a 4800 acre ranch.

Mr. Hanger, '11, is located at the Delaware Experiment Station at Newark, Del.

Ralph Barr, '10, has a position with the famous Farnsworth orchards, near Toledo.

### The Lesson of the Premium Plate

(Continued from page 18.)

Quality .....	15 points
Freedom from blemishes	25 points
Total .....	100 points

The value of the different points as given in this score card are varied somewhat by different people, but it is probably as well balanced as any. In any event, it will serve as a guide in the selection of exhibition fruit.

Some people who have an ambition to exhibit fruit may conclude after reading this article that the preparation of an exhibit will be a monumental task.

And indeed, it is no small job. But we must remember that the successful exhibitor is an expert in selecting show fruit, and that he puts much time and thought upon his exhibit. And after all, the time spent in the preparation of an exhibit is eminently worth while. Such fruit usually brings a premium on the market, and he will be a cold man indeed who will not put forth his best efforts to bring his entire crop up to the blue ribbon standard after he has once become interested in fruit exhibitions.





“He who plants the seed beneath the  
sod,  
And waits to see it turn away the clod.  
Believes in God,” his country and his  
fellowman.

---

Don't try to kill weeds working by  
the day. Better do it by the job.

---

To the young, unmarried, desirable  
man of good habits and fine prospects  
who is pondering the problem, “Do col-  
lege women marry?” Ask one of them.

---

By the time the wise man is married,  
the fool has grown-up children.—Turk-  
ish Proverb.

Flow deep while sluggards sleep.—  
Franklin.



“His corn and cattle were his only  
care,  
And his supreme delight the big State  
Fair.”

---

Home to the farm for the deep green  
calms of summer,  
Life of the open furrow, life of the  
waving grain—  
Leaving the painted world of masque-  
rade and murmur  
Just for the sense of earth and ripen-  
ing again.

M. G. D. Bianchi.—



“BEE BUSY.”



## GLEANNINGS



**Report of the Finding of the Illinois Tuberculin Commission.**—This commission, which was appointed for the purpose of inquiring into the reliability and efficiency of the tuberculin testing of dairy cattle, and the necessity of its adoption, in its report does not recommend the adoption of the test for controlling tuberculosis, but recommends the physical examination of dairy cows and a certificate as to the health of animals shipped into the state of Illinois for breeding purposes.

**The Relative Durability of Post Timbers.**—J. J. Crumley, (Ohio Station Bul. 219). With a view of determining the relative durability of different kinds of wood in contact with soil, an examination was made with 292 fence, containing 30,160 posts, made of the following kinds of wood: Osage orange, locust, red cedar, mulberry, white cedar, catalpa, chestnut, oak, honey locust, sassafras, and black ash.

In durability Osage orange appears to be far superior to the other woods. Yellow locust and red cedar come next, followed by mulberry, white cedar, catalpa, chestnut, oak, and black ash. As a rule, the durability of honey locusts, sassafras, black walnut, white walnut, and elm are poor.

The following interesting facts were also brought out: Large posts usually last longer than small ones of the same wood. It makes no difference which end of the post is put in the ground, except that preference should be given to the larger or sounder end. Posts standing in constantly wet soils last longer than in soils that are alternately wet and dry. Seasoning does not seem to have any marked effect on durability.

**The Effects of Plants on Tarring Roads.**—A study has been made of the effects which the tarring of roads may have upon both the nearby plants and those at some distance. The investigators seems to think that the greatest injury is done through the vapors which are given off in considerable abundance during dry, hot weather. In this case the greatest injury would be to trees and plants along the border of the road, in parks, or in closely settled regions, and less injury would be observed in the open country. If trees and ornamental plantings in cities are to be preserved, the use of tar on roads should be made with care.

**The Periodical Cicada in 1911.**—C. L. Marlatt (U. S. Bureau Entomology, Circular 132.) This circular furnishes information concerning the two important broods of periodical cicada that will appear in 1911. One brood belongs to the 17-year race and extends from New York southward into South Carolina. The other is one of the largest brood of the southern, or 13-year race, and covers the lower half of the Mississippi valley.

Attention is called to the fact that the damage caused by these broods is generally slight, except in the case of newly planted orchards and that even here, by vigorous pruning back after the cicada has disappeared, much of the injured caused by the egg punctures can be obviated.

**Louisiana University and Stations.**—The station recently equipped a car with exhibits of forage crops and corn and other illustrative material for a two weeks' tour over the Rock Island



lines in conjunction with representatives of the extension department of the university. The car was visited by a great many farmers and very enthusiastic meetings were held at every point visited. Special attention was given to the organization of pig clubs, and about 400 boys have been enrolled in those thus far organized. The pigs will be asked to join later.

**"The Future of Agriculture."**—This is the title of an article by O. E. Baker in the annual report of the Wis. Agr. Experiment Association. This article points to the fact that there has been a steady decrease in rural population and growth of city population, decreasing yields of crops as a result of bad farming systems, and a marked decrease in exports of staple farm products. These tendencies, it is believed, will continue to raise the price of food supplies in the future and farming for young men is urged for the following reasons: (1) Land values will steadily increase; (2) the high price of farm products is certainly to be maintained and probably increased; (3) land is a safe investment; (4) farmers can, by organization, possess great political power; and (5) farming is a healthful occupation.

The needs of modern agriculture as conceived by the author are enumerated as (1) instruction for farmers, not alone in improved methods of crop production and soil management, but even more in guidance and aid in the formation of co-operative organizations for buying and selling to put them on a level with the organized interests with which they do business; (2) schools which fit for country rather than city life; (3) better means of communication, such as good roads, telephones, a parcels post, etc.; and (4) above all, a more sanitary, wholesome, social life.

A college President says that Freshmen knew more than they formerly did. That is difficult to believe, as they have always known all there was to know.—Washington Post.

Many a man thinks he is in love when he simply has fatty degeneration of the heart.



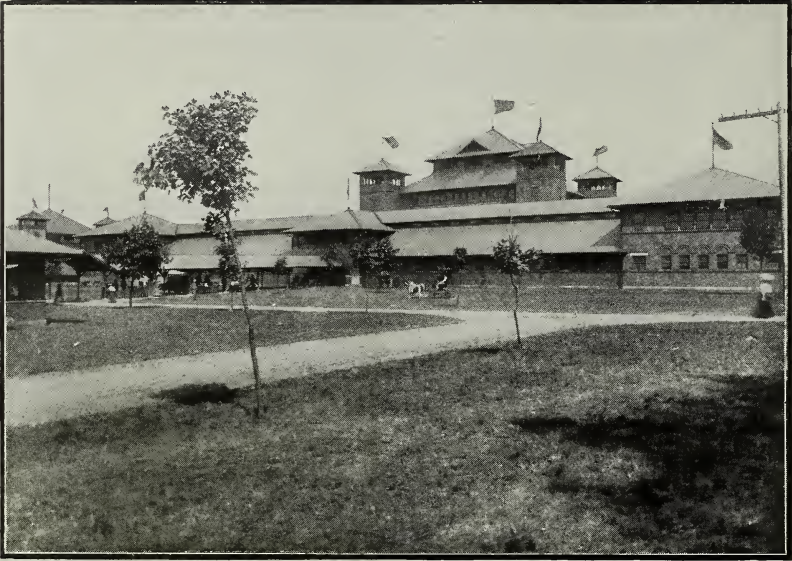
WHO GETS IT?

Mark Twain was obliged once to boil his boots to make soup to bridge a gap in his rations. He recorded afterwards that "the holes tested the best."

#### A MORALIST.

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"No, I'm not, mother," the boy replied. "I'm just telling it what it mustn't say."



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"Are you a friend of the groom's family?" asked the usher at the church wedding.

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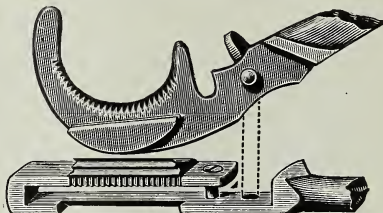
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(Figure 1760.)

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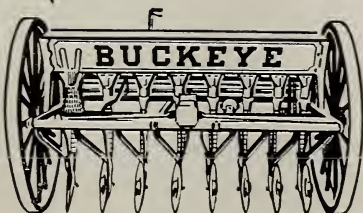
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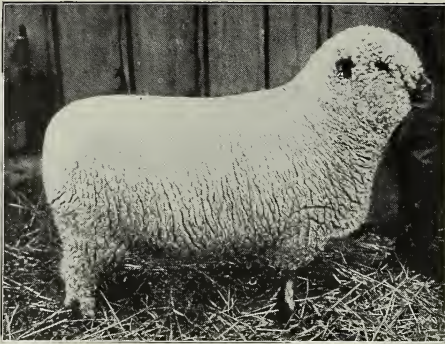
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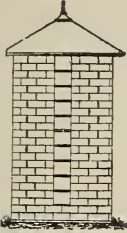
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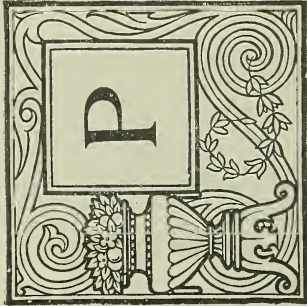
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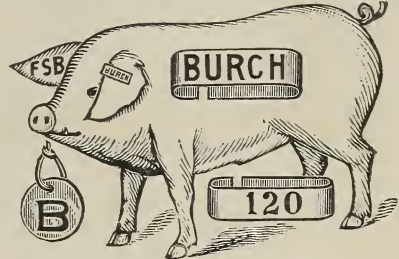
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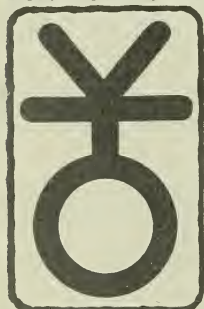
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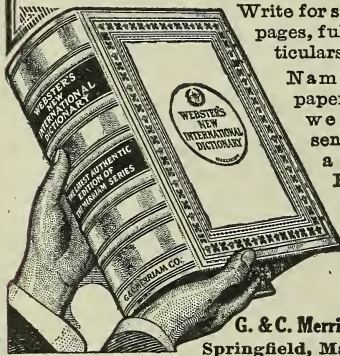
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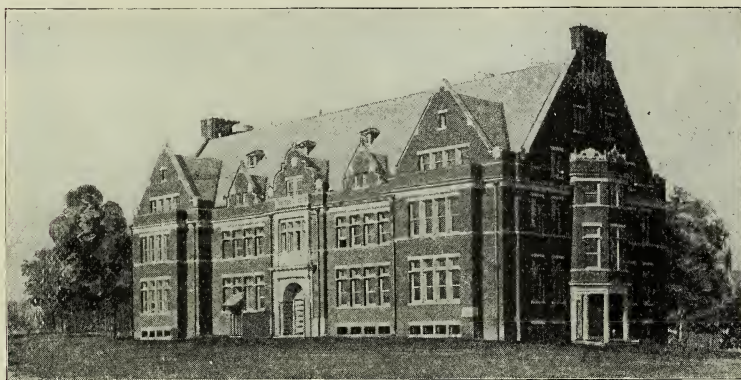
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